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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,962	04/25/2006	Franciscus Hermanus Antonius Bolder	000004.P004	1974
53418 7590 03/05/2008 HAHN AND MOODLEY, LLP P.O. BOX 52050 MINNEAPOLIS, MN 55402				
EXAMINER				
LAO, MARIALOUISA				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/542,962

Applicant(s)BOLDER, FRANCISCUS
HERMANUS ANTONIUS**Examiner**

Louisa Lao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/19/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

This communication vacates the Office Action mailed 11/19/07.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chun et al. (US3846288, US'288 *in ISR*), Sartori et al. (US6251305, US'305 *cited in US'288*), Connemann et al. (US2005/0204612, US'612) and Walkup et al. (US5252473, US'473).

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3. The instant claims are drawn to an esterification process for the reduction of acids in a hydrocarbon containing composition, said process comprising contacting the hydrocarbon containing composition with an esterification catalyst at esterification temperature and pressure, Where said esterification catalyst includes one or more catalytically active metal oxides, said hydrocarbons are FT condensate fractions and said hydrocarbons is a distilled fraction of FT condensate fraction.

4. US '288 teaches a process for reducing the acid number of hydrocarbon fractions, like petroleum distillates (col1 line 22). US'288 teaches a petroleum fraction having acid number (AN) > 0.1 is contacted with a lower alcohol, which is at stoichiometric level to lower the AN to desired level to a temperature based on the cracking temperature of said petroleum fraction (165.5-343.3°C), col2 line22, with a solid catalyst comprising an oxide of a metal selected from the Group IV-B; Al, Ge, Sn, Pb, Zn and Cd (column 3), which may be used unsupported or alternatively supported on materials such as alumina or silica. US'288 teaches an esterification process in column 2 of hydrocarbon fuel oil charge at reaction temperatures and pressures described in column 4. US '473 teaches in column 11 lines 39-57 several esterification catalysts including tungsten oxide and molybdenum oxide, which may be used alone or as mixtures, and supported on extended materials such as alumina or silica. US'288 contemplates other AN values that can be reduced would need ample alcohol, i.e. proper stoichiometric amounts to esterify the acid.

5. US'305 teaches a process for reducing the acidity of petroleum oil containing organic acids comprising treating said oil with an effective amount of alcohol at reaction temperature conducive to the reactants used (see abstract). The temperature and pressure are adjusted to type

of said oil and alcohol, including the molar ratios therein (col2 lines 8-23). The decrease in acidity is monitored with the evaluation of the AN (col2 lines 59-67).

6. US'612 teaches the continuous process of making biodiesel, where the free fatty acid (FFA) content has to be reduced via esterification by reacting with an alcohol in the presence of an acid (page 2 [0022-0023]).

7. US'473 teaches the esterification of lactic acid to methyl lactate (column 6 line 11) with esterification temperature and pressure discussed in column 7 Table 2. US'473 teaches the esterification of acrylic acid to methyl acrylate (column 13 lines 24-25), where the hydrocarbon feed included acrylic acid.

8. The instant claims differ from the cited prior art references in the silence of the cited prior art references regarding a) the acids in an FT hydrocarbon containing composition; b) specific ratios, pressures and temperatures. These differences, however, are not patentable because they would be obvious to one of ordinary skill in the art at the time of Applicants' invention. Difference a), i.e. the acids in an FT hydrocarbon containing composition would be obvious to the artisan of ordinary skill because alternate sources of starting material that have to be subjected to a reduction of acidity via esterification would be within the purview of one skilled in the art. The claims would have been obvious because "a person of ordinary skill has good reason to pursue the known options within his grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense."

9. At the time of Applicants' invention, it would have been obvious to one of ordinary skill in the art to use other known acids that are esterifiable. The artisan would reach a reasonable

expectation to be able to esterify other acids via the instant method. *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

10. The claim would have been obvious because the substitution of one known element for another, as in using a different esterifiable acid, would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The Supreme Court in *KSR* noted that if the actual application of the technique would have been beyond the skill of one of ordinary skill in the art, then the resulting invention would not have been obvious because one of ordinary skill could not have been expected to achieve it

11. As to (b) the recitation of pressures and temperatures, absent the showing of criticality and unexpected beneficial results, these are routines of optimization within the purview of one of ordinary skill in the art at the time of Applicants' invention. It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to engage in routine experimentation to determine the optimal or workable ranges that produce unexpected results. *In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955). The artisan would have expected that optimal pressure and temperature would effectuate hastening the reaction resulting to minimize production costs due to lesser man hours and energy costs.

12. No claims are allowed.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M.Louisa Lao whose telephone number is (571)272-9930. The examiner can normally be reached 8:00am to 8:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eytler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/ROSALYND KEYS/
Primary Examiner, Art Unit 1621

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